

CLAIMS

Having thus described the aforementioned invention, we claim:

1. In an electrodialysis system comprising a source of concentrate fluid, a source of dilute fluid, a collector of treated concentrate fluid; a collector of used dilute fluid, an anode, a cathode, a plurality of generally planar spacers, a plurality of membranes interleaved with said spacers to define a plurality of cells providing electrically conductive fluid connection between said anode and said cathode, each of said spacers comprising:

a gasket defining a first aperture and a second aperture, each of said first and second apertures defining an independent cell between interleaved membranes.

2. The apparatus of Claim 1 wherein said apertures have the shape of an abbreviated rectangle having squares removed from two diagonally opposed corners.

3. The apparatus of Claim 2 wherein all corners of said apertures are rounded.

4. The apparatus of Claim 1 wherein a conduit provides flow communication between said first aperture and said second aperture.

5. The apparatus of Claim 1 wherein one or more bolts extend through said spacers between said first aperture and said second aperture.

6. The apparatus of Claim 5 wherein said bolts are coated with an electrically resistant material.

7. A method of electrodialysis treatment comprising providing a source of concentrate fluid, providing a source of dilute fluid, providing a collector of treated concentrate fluid; providing a collector of used dilute fluid, providing an anode, providing a cathode, securing a plurality of generally planar spacers and a plurality of membranes interleaved with said spacers to define a plurality of cells, providing electrically conductive fluid connection between said anode and said cathode, wherein each of said spacers comprises a gasket defining a first aperture and a second aperture, each of said first and second apertures defining an independent cell between two common interleaved membranes.

8. A method in accordance with Claim 6 wherein said apertures have the shape of an abbreviated rectangle having squares removed from two diagonally opposed corners.

9. The method of Claim 8 wherein all corners of said apertures are rounded.

10. The method of Claim 8 and further comprising the step of providing flow communication from said first aperture to said second aperture.

11. An electrodialysis system comprising a source of concentrate fluid, a source of dilute fluid, a collector of treated concentrate fluid; a collector of used dilute fluid, an anode, a cathode, a plurality of generally planar spacers, a plurality of membranes interleaved with said spacers to define a plurality of cells providing electrically conductive fluid connection between said anode and said cathode, each of said spacers comprising:

a gasket defining an aperture defining an independent cell between interleaved membranes, said aperture having the shape of an abbreviated rectangle having squares removed from two diagonally opposed corners.

12. The apparatus of Claim 11 wherein all corners of said apertures are rounded.